

IN THE CLAIMS:

Please amend the claims as follows:

1-24. (Canceled)

25. (Currently Amended) A method ~~of operating a file system, said file system including~~comprising:

maintaining an active map of information indicating in-use and free blocks[[,]]
associated with said a file system;

maintaining a set of snapshots, each snapshot including a
representation representing a state of said file system ~~as it was at an earlier time, said~~
~~method including~~at a particular point in time; and

computing a summary map in response toas a logical union of ~~at least two~~
~~copies of earlier active maps included in at least two of said snapshots.~~

26. (Currently Amended) A method as in claim 25, further including:

making write allocation decisions in response toin said file system based on said
summary map.

27. (Previously presented) A method as in claim 25, wherein
said summary map is computed using an inclusive OR operation.

28. (Original) A method as in claim 25, wherein

said set of snapshots includes at least two said snapshots; and
said computing includes performing a bitwise logical operation on at least two
said copies of earlier active maps included in said set of snapshots.

29. (Currently Amended) A method as in claim 25, further including:
making write allocation decisions based on both ~~in response to~~ a current active
map and ~~in response to~~ said summary map.

30. (Currently Amended) A method as in claim 25, further including:
computing a combination of a current active map and said summary map; and
making write allocation decisions ~~in response to~~ based on a result of said
computing.

31. (Currently Amended) A method as in claim 25, further including, for a
selected portion of said summary map
identifying a set of snapshots created since a recent update of said selected
portion; and
updating said selected portion ~~in response to~~ based on only a most recent one of
said snapshots.

32. (Currently Amended) A method comprising:
~~In a file system including~~ maintaining an active map of information indicating in-
use and free blocks[[,]] associated with ~~said a~~ a file system;

maintaining a set of snapshots, each snapshot ~~including a representation~~representing a state of said file system ~~as it was at an earlier time, said file system~~at a particular point in time;

maintaining a summary map ~~in response to at least one copy of~~based on an earlier active map included in at least one of said snapshots, ~~a method of updating said summary map, said method including~~;

receiving a request to delete a ~~selected~~particular snapshot; and

deleting said particular ~~selected~~-snapshot, wherein said deleting involves, for a block used by said particular ~~selected~~-snapshot, indicating said block is free in said summary map ~~only in response to~~depending on a snapshot just prior to said particular ~~selected~~-snapshot and ~~in response to~~ a snapshot just after said particular ~~selected~~ snapshot.

33. (Currently Amended) A method as in claim 32, wherein said indicating frees said block only when both

said block is unused by said snapshot just prior to said particular ~~selected~~ snapshot; and

said block is unused by said snapshot just after said particular ~~selected~~ snapshot.

34. (Currently Amended) A method as in claim 32, wherein said snapshot just after said particular ~~selected~~-snapshot corresponds to an active file system.

35. (Currently Amended) A method comprising: ~~In a file system including~~
~~maintaining~~ an active map of information indicating in-use and free blocks[[,]]
associated with said a file system;

maintaining a set of snapshots, each snapshot ~~including a representation~~
representing a state of said file system as it was at an earlier time, said file system at a
particular point in time;

maintaining a summary map computed ~~in response to~~ as a logical union of at
~~least two copies of an earlier active map~~ active maps included in at least two of said
snapshots, ~~a method of updating said summary map, said method including;~~

selecting a set of blocks maintained by said file system for which to perform a
write allocation operation;

updating only a portion of said summary map corresponding to said set of
blocks, in response to said selecting; and

performing said write allocation operation in response to said updated summary
map.

36–39. (Canceled)

40. (Previously presented) A file system as in claim 35, wherein
said summary map is computed using an inclusive OR operation.

41. (New) A method as in claim 32, wherein said summary map represents a logical union of at least two copies of an earlier active map included in at least two of said snapshots.

42. (New) A method as in claim 41, wherein said logical union is an inclusive OR operation.

43. (New) A method comprising:
maintaining an active map of information indicating in-use and free blocks associated with a file system;
maintaining a plurality of persistent point-in-time images, each persistent point-in-time image representing a state of said file system at a particular point in time; and
generating a summary map as a logical union of active maps included in at least two of said persistent point-in-time images.

44. (New) A method as in claim 43, further including:
making write allocation decisions in said file system based on said summary map.

45. (New) A method as in claim 44, wherein
said summary map is computed using an inclusive OR operation.

46. (New) A method as in claim 43, wherein said generating includes performing a bitwise logical operation on at least two said copies of earlier active maps included in said set of persistent point-in-time images.

47. (New) A method as in claim 43, further including:
making write allocation decisions based on both a current active map and said summary map.

48. (New) A method as in claim 43, further including:
determining a combination of a current active map and said summary map; and
making write allocation decisions based on a result of said computing.